



### **Case report – Acupuncture treatment in patient with osteopenia and MEN1**

Prof Dr Jihe Zhu<sup>1</sup>, BSc Blagica Arsovska<sup>1,2</sup>, BSc Kristina Kozovska<sup>1,3</sup>

<sup>1</sup>Faculty of Medical Sciences, University Goce Delchev, Shtip, Republic of Macedonia;

<sup>2</sup>Institute of Biology, Faculty of Natural Sciences and Mathematics, Skopje, Republic of Macedonia

<sup>3</sup>Medicine Faculty, St. Cyril and Methodius University of Skopje, Republic of Macedonia

**Corresponding Author:** Kristina Kozovska, Medicine Faculty, St. Cyril and Methodius University of Skopje, Republic of Macedonia

**Type of Publication:** Case Report

**Conflicts of Interest:** Nil

#### **Abstract**

There are many common cases of patients who come with endocrine problems which have resulted in even more complications. The treatment is slow and difficult because it is a hormonal and an endocrine system problem. The patients with endocrinology problems are usually fatigued and without energy, their metabolism is slow and all processes in the body are slowed down. Traditional Chinese Medicine (TCM) treats this kind of conditions for years and the results are satisfying. The treated patient is 25 year old young woman diagnosed with MEN1 post opp pp Insulinom, osteopenia, adenoma of the pituitary gland and primary hyperparathyroidism. The condition is genetic and the patient's father is deceased from the same disease. 11 years ago during the surgery 2/3 of the pancreas was removed and the patient is let to live with only one part - the tail of the pancreas. The patient's menstrual cycle is not regular and one year after the pregnancy she got galactorrhea. The patient was treated with acupuncture. 9 treatments were made in a period of two months. After the treatment the PTH level was normalized, vitamin D and Calcium levels were normalized, results from the hormonal test were normal,

the menstrual cycle is normalized, no galactorrhea is present and the patient does not take hormonal therapy anymore. The patient is in excellent condition and her condition will be followed in the coming months.

**Keywords** – Acupuncture, Traditional Chinese Medicine, Treatment, Osteopenia, MEN1

#### **Introduction**

There are many common cases of patients who come with endocrine problems which have resulted in even more complications. The treatment is slow and difficult both for the Western and Chinese medicine because it is a hormonal and an endocrine system problem. The patients with endocrinology problems are usually fatigued and without energy, their metabolism is slow and all processes in the body are slowed down.

The MEN Syndrome stands for Multiple Endocrine Neoplasia. This condition causes enlargement and over-activity of certain endocrine glands. The condition typically involves tumors in multiple endocrine glands that may be cancerous or noncancerous. The MEN syndrome is usually inherited condition that runs in families and is passed from one generation to the next. The disease is known as autosomal dominant disease

because it passes more than 50% from the parent to the children. There are three main types of MEN syndrome - MEN 1, MEN 2a and MEN 2b:

- MEN 1 - Parathyroid, pancreatic and pituitary tumors;
- MEN 2a - Parathyroid tumors, medullary thyroid cancers and pheochromocytom;
- MEN 2b - Medullary thyroid cancers, neuromas and pheochromocytoma.

These types of syndromes are rare, affecting up to one in 30,000-35,000 people. The risk for MEN is similar in men and women.

In MEN1 the tumors usually first appear in the parathyroid glands. The disease's first sign is symptoms of overactive parathyroid glands - hyperparathyroidism, which releases too much calcium into the bloodstream. [1] [2] Clinical manifestations that may occur are bone abnormalities, hypercalcemia and nephrolithiasis. [3]

The second most common manifestation of MEN1 is pancreatic islet cell tumor. Tumors that may appear are: Insulinoma, gastrinoma, glucagonoma, vasoactive intestinal polypeptidoma and pancreatic polypeptidoma. The second most common functioning pancreatic neuroendocrine tumor in MEN1 are insulinomas, which are developing at young age in about 10-30% of the patients.

MEN1 associated anterior pituitary tumors most commonly in 60% of the cases secrete prolactin, followed by tumors that secrete growth hormone in 25% of the cases. These tumors are less responsive to therapy. [3]

The female patients with primary hyperparathyroidism have lower femoral neck and lumbar spine bone mineral density. Osteopenia and osteoporosis are diagnosed in many young female patients with MEN1 and are frequent and early complications of primary hyperthyroidism in MEN1. In one study it was shown that 44% of the patients

with MEN1 and associated primary hyperparathyroidism had severe osteopenia by 35 years of age. [4] [5]

Traditional Chinese Medicine (TCM) has been shown to be effective in improving the endocrine system problems and increasing the bone density. The aim of the TCM is to restore the balance of the Yin and Yang energy, remove the blockages from the energy pathways, restore the Qi and Blood flow, balance the hormones, improve the immune system and many more. Acupuncture and herbal medicine as part of TCM are safe and effective treatments, which promote healthy equilibrium. The both treatments play an important role in balancing the emotions, regulating the menstrual cycle and promoting healthy organ function. [6]

### **Case report**

The treated patient is 25 year old young woman diagnosed with MEN1 post opp pp Insulinom, ospteopenia, adenoma of the pituitary gland and primary hyperparathyroidism. The condition is genetic and the patient's father is deceased from the same disease. At the age of 11 during the surgery 2/3 of the pancreas was removed and the patient was let to live with only one part - the tail of the pancreas. The patient's menstrual cycle is not regular and one year after the pregnancy she got galactorrhea.

The patients was treated with acupuncture in a clinic for TCM and acupuncture in Skopje, Macedonia. 9 treatments were made in a period of two months. Treatments were made indoor, on a room temperature. The duration of the treatment was 30-45 minutes. Acupuncture points that were treated are located on the front side of the body. Points that were treated are: Gv20 (Baihui), St36 (Zusanli), St25 (Tianshu), Ren12 (Zhongwan), Ren6 (Qihai), Li4 (Hegu), Sp6 (Sanyinjiao), Lv3 (Taichong) and Ashi points located on the front side of the neck.

Before the treatment the patient was taking Furosemide 40mg 1+1/2, Fosavance 1x1 weekly and Destinex 2+1/2 weekly. Furosemide is diuretic and Fosavance is used in patients with osteoporosis to prevent the risk of hip and vertebral fractures. Destinex is used for hyperprolactinemic disorders due to pituitary adenomas. After the treatment the patient is no longer taking any medications. After the treatment the PTH level was normalized, vitamin D and Calcium levels were normalized, results from the hormonal test were normal, the menstrual cycle is normalized, no galactorrhea is present and the patient does not take hormonal therapy anymore. The results before and after the treatment are shown in table 1.

Table 1. Results from blood analysis before and after the treatment.

Test	Before treatment	After treatment	Ref. values
Na	139	141	130-150 m.mol/L
K	4.6	4.2	3.3-5.6 m.mol/L
Ca	1.66	1.33	1.10-1.40 m.mol/L
Vitamin D	11.27	19.48	25-110 m.mol/L
PTH	151.6	14.57	15-65 pg/ml
TSH	2.03	1.00	0.27-4.20 mU/l
LH	2.1	4.21	1.6-10.2 mU/ml
FSH	5.05	4.52	3-12 mU/ml

Although the values are slightly below normal, the patient's condition is stable and is in excellent health condition. The values are closest to the normal as never been before. The discontinuation of medication therapy prescribed by doctors is proof that the condition has improved and the body is functioning well.

## Discussion

There may be several reasons why many women and men struggle with hormonal imbalances, but there is never one thing that can help in rebalancing optimal hormone levels.

Since hormones have a synergistic connection with the nervous system and the brain, the treatment must be approached in the same way. Decreasing psychological and physical toxins, eliminating the toxic exposure and harmonizing the emotional state are all integral pieces that need to be considered in order to return hormones in balance and harmony with the body. In TCM, the Kidney system is responsible for the function of sex glands (ovaries and testes), pituitary gland, adrenal gland, hypothalamus and thyroid gland. TCM considers that the Kidney system is closely related to the endocrine system in Western medicine, but however it has a wider function. In TCM the main focus is on balancing the communication between the pituitary and hypothalamus, located in the brain, and the organs that secrete hormones like the thyroid, adrenal glands, breasts, uterus, ovaries, prostate and testicles. In TCM these hormones are called Jing Qi which represents a battery that provides the bodies with basic energy to power all the life functions. When the Jing Qi energy declines, the organs and hormones within our body become unbalanced. [7]Acupuncture is safe and effective treatment which promotes healthy equilibrium and accesses the nervous system and helps in the regulation of an overactive or underactive response from the organs. Acupuncture is concentrating on harmonization of the Qi energy that stimulates various glands at the same time. Acupuncture nourishes the glands and forces them and their hormones to circulate and flow around the organism. With the stimulation of the movement of the Qi energy, acupuncture helps in the creation of healthy synergy between different glands that result in proper functioning of the whole body. [7]Although the basis of the human diseases is imbalance between the Yin and Yang energy, the most important element in the treatment of endocrine disorders is focused on the Kidney meridian. By strengthening the Kidney,

along with the other organs like the Liver, Spleen and Heart, acupuncture can help with regulating the energy levels, restoring the hormonal balance and emotional stability and helping to manage the menstrual and sleep problems. [8]

### Conclusion

Traditional Chinese Medicine (TCM) treats this kind of conditions for years and the results are always satisfying and positive. The patient is in excellent condition and her condition will be followed in the coming months.

### References

1. Vellanki P; Multiple Endocrine Neoplasia: MEN Types 1 and 2; 2014 [www.endocrineweb.com]
2. Norman J; M.E.N. Syndromes: Multiple Endocrine Neoplasia; 2013 [www.endocrineweb.com]
3. Anastasopoulou C; Multiple Endocrine Neoplasia Type 1 (MEN1); 2017 [www.emedicine.medscape.com]
4. Burgess JR, David R, Greenaway TM, Parameswaran V, Shepherd JJ; Osteoporosis in multiple endocrine neoplasia type 1: severity, clinical significance, relationship to primary hyperparathyroidism, and response to parathyroidectomy; Arch Surg. 1999 Oct;134(10):1119-23.
5. Piecha G, Chudek J, Wiecek A; Primary Hyperparathyroidism in Patients with Multiple Endocrine Neoplasia Type 1; Int J Endocrinol. 2010; 2010: 928383.
6. Buonocore G; The Yin and Yang of Hormonal Balance: A Traditional Chinese Medicine Perspective; 2017 [www.imi.com.hk]
7. Sinha R; Chinese Medicine and Hormones; 2017 [www.bellafioreklinik.com]
8. Eun S; Improve Your Endocrine Health Through Chinese Medicine; 2015 [www.allendaleacupuncture.com]